

Published in final edited form as:

J Occup Environ Med. 2012 November ; 54(11): 1337–1343. doi:10.1097/JOM.0b013e3182717cf2.

Workplace Health Promotion Implementation, Readiness, and Capacity Among Mid-Sized Employers in Low-Wage Industries: A National Survey

Peggy A. Hannon, PhD, Gayle Garson, EdD, Jeffrey R. Harris, MD, Kristen Hammerback, MA, Carrie J. Sopher, MPH, and Catherine Clegg-Thorp, MPH

Health Promotion Research Center, a CDC Prevention Research Center at the University of Washington School of Public Health. Dr. Garson is now at the Northwest Center to Reduce Oral Health Disparities at the University of Washington; Ms. Sopher is now at the Fred Hutchinson Cancer Research Center

Abstract

Objective—To describe workplace health promotion (WHP) implementation, readiness, and capacity among mid-sized employers in low-wage industries in the United States.

Methods—A cross-sectional survey of a national sample of mid-sized employers (100–4,999 employees) representing five low-wage industries.

Results—Employers' WHP implementation for both employees and employees' spouses and partners was low. Readiness scales showed that employers believe WHP would benefit their employees and their companies, but they were less likely to believe that WHP was feasible for their companies. Employers' capacity to implement WHP was very low; nearly half the sample reported no capacity.

Conclusion—Mid-sized employers in low-wage industries implement few WHP programs; their responses to readiness and capacity measures indicate that low capacity may be one of the principal barriers to WHP implementation.

Chronic diseases are leading causes of mortality and morbidity among working-age adults. Five chronic diseases – cancer, chronic lower respiratory disease, diabetes, heart disease, and stroke – account for more than 50% of adult deaths in the United States.¹ Overweight and obesity, physical inactivity, poor eating habits, and tobacco use are modifiable risk behaviors that are associated with these diseases.² Improving these behaviors would lead to substantial reductions in death and disability,^{2,3} and significant savings in medical costs.⁴

The workplace offers an important opportunity to reach adults with evidence-based approaches to improving healthy eating, physical activity, weight management, and tobacco cessation. The majority of US adults is employed and spends a significant proportion of their waking hours at work.^{5,6} The *Guide to Community Preventive Services* recommends several policy and program approaches to addressing these risk behaviors, including smoke-free tobacco policies, and programs to reduce obesity.^{7–10} In addition, the *Guide* recommends increasing access to telephone support and tobacco cessation medications to increase tobacco cessation, increasing access to healthy foods at the workplace, and expanding access

Corresponding Author: Peggy A. Hannon, Health Promotion Research Center, University of Washington, Telephone: 206-616-7859, Fax: 206-543-8841, peggyh@uw.edu.

Conflict of Interest: None to declare.

to physical activity resources to increase physical activity.^{10–12} All of these interventions can be implemented in workplace settings.

Despite the potential reach and power of workplace health promotion (WHP), many employers offer limited WHP to their workforce. Workplace size (number of employees) and industry are both associated with WHP. Large employers (often defined as 1000 or more employees^{13,14}) are most likely to offer WHP.^{14,15} Mid-sized employers are a relatively under-explored audience, but an important one for WHP and related research. Mid-sized employers employ nearly 1 in 5 employees in the United States, and most have the resources to offer employees health insurance.¹⁴ Though mid-sized employers have fewer WHP programs in place than large employers, they have the resources to offer more WHP than small employers.¹⁶

Employers in low-wage industries generally offer less WHP than employers in higher-wage industries.¹⁷ Low-wage employees (those with annual household incomes < \$35,000) have higher health risk behaviors than employees above these incomes,^{14,18} and these differences persist when including only insured employees.¹⁹ Prior WHP research shows that low-wage employers can successfully implement WHP programs,^{20–23} and their employees are receptive.^{24–28} Therefore, improving WHP implementation at low-wage workplaces has the potential to reach and benefit a group of employees with significant health behavior risks.

In order to improve WHP implementation at mid-sized companies in low-wage industries, it is critical to learn more about what they currently offer, to whom, and their readiness and capacity to increase implementation. We conducted focus groups with representatives from 34 mid-sized employers in low-wage industries from King County, Washington, and learned about their current WHP offerings, and their WHP barriers and facilitators.²⁹ The findings from the focus groups informed the development of a national survey of mid-sized employers in low-wage industries described in this paper. Several surveys of employers present WHP implementation by employer size^{13,30,31} but do not present findings by industry or average wage. Other surveys present findings by industry, but do not include analyses showing how WHP implementation varies by size and industry simultaneously.^{15,17} To characterize these employers' current WHP programs and policies, we conducted a national survey of mid-sized employers in five low-wage industries. Our survey addressed two additional important issues; WHP reach to employees' spouses and partners, and employers' readiness and capacity to implement WHP.

WHP Reach to Employees' Spouses and Partners

Employers have the opportunity to reach not only employees, but employees' family members as well. Despite calls for including spouses and dependents in WHP that date back over 20 years,^{6,32} few WHP studies formally address employees' spouses and partners (hereafter partners). Yet making WHP programs and resources available to partners could increase WHP reach at a relatively low cost.³³ The Kaiser Family Foundation found that 52% of firms offering health benefits offered wellness programs of some type to spouses or dependents; however, in this case, most of the wellness programs were provided directly by the health plan rather than by the employer.¹⁷ We are unaware of formal surveys of the frequency with which WHP programs are offered to partners.

WHP Readiness and Capacity

To succeed in increasing WHP implementation among mid-sized workplaces in low-wage industries, it will be critical to address employers' readiness to adopt and implement WHP. Several dissemination frameworks include readiness as a key feature of whether an intervention (such as a WHP program or policy) will be adopted and implemented.^{34–36} Key

features of an organization's readiness to adopt and implement a new intervention include both attitudinal readiness, e.g., perceived need for the intervention and perceived fit of the intervention with the organization, as well as structural capacity, e.g., monetary resources and/or staff time dedicated to the intervention.³⁴ Many measures of readiness have been developed, but few are applicable to WHP (most were developed for health care settings) and few have been validated.^{37,38} There are several assessments of workplace environments and how they support healthy behaviors,^{39–41} but these generally did not include the readiness components described above. Other WHP readiness scales have been developed in other countries;^{42,43} the health and healthcare context is different enough in countries with national health care systems that these instruments may not generalize to U.S. workplaces.

The present study was designed to address the gaps in the literature described above and to better understand how to improve WHP implementation among mid-sized employers in low-wage industries. Research questions included describing this group of employers' current WHP policies and practices, learning whether they offer WHP to partners, and their readiness and capacity to implement WHP. To address these questions, we conducted a survey of a nationally representative sample of mid-sized employers from five industries that employ over 50% of Americans working in private firms,⁴⁴ and pay employees mean salaries less than \$45,000 per year.¹⁴ Their WHP practices affect a significant proportion of the U.S. Workforce

Methods

Study Design and Sample

The survey gathered information from a cross-sectional, nationally representative sample of mid-sized US businesses in five industries: Accommodation and Food Services, Education, Health Care and Social Assistance, Manufacturing, and Retail Trade. We purchased a list of employers from Research America, a market research firm located in Newton Square, PA. We selected a simple random sample of 1,025 mid-sized companies (defined as 100–4,999 employees) that was statistically representative of employers from the five target industries, identified by SIC codes. Eligibility criteria included size of 100–4,999 employees, location was company headquarters, and primary industry category of one of the five target industries.

Procedures

Research America administered the survey via telephone. Call center interviewers contacted each business up to 20 times to attempt an interview. Interviewers asked to speak with either the benefits manager or the person who knew most about the health benefits and programs at the company. Interviewers used a computer-assisted telephone interview (CATI) program that automatically guided them through appropriate skip patterns and follow-up questions. Interviews took 10–15 min to complete. Respondents were offered \$25 as an incentive for completing the survey.

Measures

The survey questionnaire included four content areas: company characteristics (e.g., industry, number of employees), current WHP policies and programs, WHP readiness, and WHP capacity (e.g., wellness staff or committee, budget dedicated to wellness). The research team identified content areas and developed survey questionnaire items drawing from three resources. First, we reviewed transcripts from five focus groups we conducted with similar employers in King County, WA in a related study²⁹ to identify the overall content areas needed. Second, we used measures we developed in collaboration with the American Cancer Society to develop items measuring WHP implementation.^{45,46} Third, we

reviewed the dissemination literature to draw from readiness and capacity measures that had already been developed. The complete survey questionnaire is available from the authors on request.

We measured current WHP policies and programs that are consistent with approaches recommended by the *Community Guide*⁷, including providing healthy food, offering a healthy eating or weight management program, providing fitness facilities at the worksite, offering fitness center discounts, offering a physical activity program, having a written tobacco policy in place, and offering a telephone-based tobacco cessation program. Respondents indicated whether each of these was present or not at their company. Respondents who reported offering a healthy eating/weight program, fitness center discounts, a physical activity program, or a telephone-based tobacco cessation program to employees were asked whether these were available to employees' partners.

Based on the dissemination and implementation literature, we developed readiness questions to assess employers' general readiness to change, and WHP-specific readiness to change. We asked respondents three questions about their companies' ability to make changes in general and eight questions about WHP-specific readiness to change. These items covered perceived need for and potential effectiveness of WHP at their company, leadership's willingness to commit resources to WHP, and employees' willingness and ability to participate in WHP. All readiness items were answered using 5-point Likert-type scales (1=strongly disagree, 5=strongly agree). To measure employers' capacity to implement WHP, we asked whether their company had a dedicated wellness budget (no=0, yes=1), part-time or full-time wellness staff (no staff=0, part-time staff=.5, and full-time staff=1.0), and a wellness committee (no=0, yes=1). We combined these three items to create a WHP Capacity score with a range of 0–3.

Data Analysis

We performed all analyses using SAS 9.2.⁴⁷ We conducted simple descriptive analyses to characterize the respondents' workplaces and to summarize their current WHP implementation, readiness, and capacity. We also conducted subgroup analyses of WHP implementation, readiness, and capacity by employer size (100–249 employees v. 250–4999 employees) and industry, as prior studies have significant differences in WHP implementation by both of these characteristics. We conducted a principal components factor analysis with promax oblique rotation (which allows for identification of factors while allowing for the possibility of correlation among factors) of the readiness items to identify the underlying factors, and calculated coefficient alpha for the three resulting scales. Finally, we calculated correlation coefficients to assess the relationship of the readiness and capacity scales with current WHP implementation. Six respondents did not provide responses to 50% or more of the readiness items; these respondents were deleted from all analyses including the readiness items.

Results

Sample Characteristics

Of the 1,025 companies in the sample, 856 met the eligibility criteria. Research America completed survey interviews with 279 of the eligible companies; the overall response rate was 33.2% (according to response rate 3 of the American Association for Public Opinion Research⁴⁸). Most respondents were from the Education, Health Care & Social Assistance, and Manufacturing industries (see Table 1). Accommodation & Food Service and Retail Trade companies were less likely to participate in the survey (although these two industries represented 30% of the sample, only 18% of respondents were from these industries); as

there were relatively few respondents in these industries and as their responses were similar, we grouped these in analyses presented by industry.

Participating companies were evenly distributed across those with 100–249 employees (52%) and those with 250–4,999 employees (48%). After performing analyses separately for companies with 250–999 employees and companies with 1000–4,999 employees, we combined these two groups for the analyses presented by size in this paper. There were relatively few respondents in the 1000–4,999 group, and their responses were similar to those in the 250–999 group. Almost all of the respondents offered health insurance to employees (99%) and their partners (95%); respondents estimated that 65% of their employees were covered by the company health insurance. Nearly half of the companies (47%) were self-insured, with companies with 250–4,999 more likely to report that they were self-insured (57%) than companies with 100–249 employees (37%).

WHP Implementation

Employers' current WHP policies and programs are presented in Table 2a. About half of the respondents reported offering healthy food (52%) and having a written tobacco policy (48%). Employers were least likely to offer physical activity programs (19%) and telephone-based tobacco cessation programs (23%). Larger companies were more likely to offer each policy and program than smaller companies. There was also significant variation by industry, with Accommodation & Food Services/Retail Trade reporting the lowest implementation for all policies and programs. Very few employers (1%) were implementing all seven of the programs and policies we assessed; only 7% were implementing 80% or more of the programs and policies.

Of the companies that offered WHP programs to employees, some extended these to employees' partners. Table 2b presents the proportion of all employers offering WHP to partners. Employers were most likely to offer fitness center discounts to partners (27%) and least likely to offer physical activity programs to partners (9%).

Readiness to Change

The factor analysis of the 11 readiness to change items revealed underlying factors explaining 67% of the variance (one item of the 11 was dropped based on poor factor loadings; the final rotated factor solution for the remaining 10 items is available from the authors on request). The first factor included three items assessing beliefs that WHP would benefit the company (WHP Perceived Benefits scale). The second factor included three items assessing beliefs that the company was ready and able to make general changes when needed (General Readiness scale). The third factor included four items assessing beliefs that WHP was feasible for the company (WHP Feasibility scale). The three scales (items and their characteristics) are presented in Table 3.

Cronbach's coefficient alpha was acceptable-to-good for the General Readiness scale (.76), the WHP Feasibility scale (.78) and the WHP Perceived Benefits scale (.82); we included all of the items in these scales for the remaining analyses. Respondents were more likely to agree with items in the WHP Perceived Benefits scale (scale M=3.92) than the WHP Feasibility scale (scale M=3.14). Respondents were least likely to agree that their senior leadership would be willing to commit financial resources to WHP (item M=3.15) and that employees at their company would be able to participate in a group-based program (item M=2.75). Readiness scale means are presented by industry and size in Table 3. General Readiness was fairly stable across industry and size. WHP Perceived Benefits and WHP Feasibility varied by industry; for both scales, Health Care/Social Assistance reported the highest scores and Accommodation/Food Services & Retail Trade reported the lowest.

WHP Capacity

Respondents reported low WHP Capacity, with mean levels of capacity < 1.00 on a scale ranging from 0–3 (see Table 4). Capacity varied by company size, with larger companies reporting higher capacity ($M=1.08$) than smaller companies ($M=0.60$). Accommodation and food services/retail trade companies reported lower capacity ($M=0.43$) than companies representing the other industries (M ranged 0.89–0.94). The modal WHP Capacity score in this sample was 0 ($N=130$).

Associations of Readiness and Capacity with Implementation

Table 5 shows associations of the readiness to change scales with WHP Capacity and WHP Implementation. In general, associations among measures were similar across companies with 100–249 employees and companies with 250 or more employees (data not shown). General Readiness was positively associated with WHP Feasibility ($r = .41$, $p < .01$), but not with WHP Perceived Benefits ($r = .01$, ns). Both WHP Perceived Benefits and WHP Feasibility were positively associated with WHP Capacity ($r = .32$ and $.47$ respectively, both $ps < .01$). WHP Capacity was positively associated with WHP Implementation ($r = .56$, $p < .01$) and offering WHP to employees' partners ($r = .43$, $p < .01$).

Discussion

This paper presents the first WHP national survey we are aware of that described mid-sized companies in five low-wage industries employing a significant proportion of U.S. employees. We measured companies' implementation of evidence-based WHP programs and policies and their extension of these programs to employees' partners. We also developed new measures to assess companies' readiness and capacity to adopt WHP policies and programs.

Consistent with other national surveys,^{15,17} we found that employers' implementation of evidence-based WHP to support healthy eating, physical activity, and tobacco policy is low. However, the implementation rates may overestimate WHP implementation among mid-sized employers in these low-wage industries, for two reasons. First, to keep the survey brief, the implementation measures were dichotomous; employers received equal credit whether a policy or program reached all employees at all worksites, or only some employees at some worksites. Second, as the response rate was 33%, it is possible that there was response bias such that employers offering more WHP were more likely to participate in the survey. This is a particular concern among two of the industries represented in this survey, Accommodation/Food Services and Retail Trade, both of which participated at lower rates than anticipated based on their representation in the initial sample. These two industries also reported the lowest WHP implementation; both their reluctance to engage in discussing WHP and their low implementation is consistent with the findings from our prior focus groups.²⁹

Overall, few employers in this survey offered WHP programs to employees' partners. This finding was largely driven by the fact that most employers did not offer WHP to the employees; many employers that did offer fitness center discounts and telephone-based tobacco cessation programs to their employees offered these to employees' partners as well (69% and 61%, respectively). In contrast, fewer employers offering healthy eating/weight programs and physical activity programs to employees offered these to employees' partners (37% and 47%, respectively). Overall, our findings are similar to those of the Kaiser Family Foundation, which found that 52% of employers offering wellness benefits to employees offered them to spouses.¹⁷ What is less clear (both in the present survey and in the Kaiser survey) is whether the WHP offered to partners is provided by the employer or the insurance

plan. This will be important to tease apart in future studies; if employers are willing and able to extend only insurance-based WHP to partners, the implications for future WHP intervention studies are quite different than if employers are willing to incur additional expenses or leverage internal resources to reach partners.

The readiness items we developed reflected three underlying scales, each with good internal consistency. These scales, General Readiness, WHP Perceived Benefits, and WHP Feasibility, map well to constructs from Weiner and colleagues' theory of organizational readiness to change, which includes contextual factors (some of which align with General Readiness), change commitment (similar to WHP Perceived Benefits) and change efficacy (similar to WHP Feasibility).⁴⁹ More importantly, the readiness scales shed light on why these employers' WHP implementation is low. Although most respondents agreed that WHP would benefit their company, they were less likely to agree that WHP was feasible for their company. Their low WHP Capacity scores (e.g., lack of wellness budgets, dedicated staff, or wellness committees) add weight to their perceptions that it would be challenging for them to implement WHP. On the other hand, WHP Capacity was strongly and positively associated with WHP implementation, suggesting that employers can increase the odds of implementation success by increasing the dollars and/or staff time they devote to it. These findings are similar to those of the 2004 National Worksite Health Promotion Survey, in which employers with a designated wellness staff member were significantly more likely to offer a comprehensive wellness program than employers without designated wellness staff.¹⁵

Several of these WHP approaches (e.g., having a written tobacco policy, providing discounted gym memberships) may not entail an up-front monetary cost for employers, but do take staff time to implement. Interestingly, 46% of employers participating in the 2011 Kaiser Family Foundation Employer Health Benefits Survey reported that the primary reason they offered wellness programs was that the programs were part of the health plan (this was the most commonly given primary reason).¹⁷ Similarly, employers participating in the 2004 National Worksite Health Promotion Survey noted that their health plans were the primary source of funding for most wellness activities.¹⁵ The attractiveness of insurance-based wellness programs has two important implications for those wanting to reach employees in low-wage industries via WHP. First, it is likely that only employees insured by the employer have access to most or all of the insurance-based wellness programs offered. Yet, in many low-wage industries, a significant proportion of employees is not insured by the employer and would not be reached by insurance-based wellness programs (in the present survey, employers estimated that 35% of their employees were not covered by the company insurance plan). Second, the attractiveness of insurance-based wellness programs may largely lie in the fact that they do not require additional investment of the employers' staff time or efforts.

If the Affordable Care Act⁵⁰ proceeds as planned, the reach of insurance-based wellness programs will expand rapidly over the next few years. Even in this best-case scenario, several of the WHP policies we assessed are unlikely to be addressed by insurance-based wellness programs. Policies governing tobacco use at the workplace, the types of food available at the workplace, and access to physical activity facilities at or near the workplace will continue to be up to employers.

Our findings suggest that the people responsible for WHP at mid-sized employers in low-wage industries understand the potential benefits of WHP for their employees and for their bottom lines. The barriers to implementation are that they have extremely limited capacity to support implementation, they are unsure their leaders are willing to commit resources to increase capacity, and they are unsure whether their employees would be willing or would

have time to participate in WHP programs. The key to increasing these employers' WHP implementation may not be "making the case" for WHP to them so much as improving their implementation capacity.

Future Research

This survey has implications for future research in two areas: WHP interventions targeting this audience of employers, and assessment of workplaces' WHP readiness and capacity. We found that mid-sized employers in the low-wage industries participating in this national survey implement some evidence-based WHP policies and programs, but that overall implementation is low, particularly among (a) employers with 100–249 employees and (b) employers in the Accommodation/Food Services and Retail Trade industries. On the one hand, this is an attractive audience for WHP interventions, both because they employ low-wage workers likely to have high health risks and limited access to other resources, and because they have so much room for growth. On the other hand, the extremely limited WHP capacity most employers reported makes the potential success of efforts to disseminate WHP interventions to these employers doubtful.

Several WHP interventions, including those we have developed, focus on (a) recommending evidence-based WHP interventions, (b) offering toolkits or other written materials to support implementing the interventions, and (c) offering some level of technical assistance (provided by an outside source) during the implementation phase.^{45,46} Findings from this survey are steering us toward modifying this approach to include an internal capacity-building component at the beginning of the intervention (for example, forming a wellness committee). A promising approach that potentially takes advantage of existing capacity within the workplace is integrating wellness with workplace safety efforts;⁵¹ this approach may be most effective in workplaces where safety is a daily, salient issue for most employees (e.g., manufacturing, food services).

The present survey identified four brief potential measures of employers' WHP readiness and capacity. These scales can be administered quickly, are internally consistent, and show cross-sectional positive associations with WHP implementation. The next step will be to assess the reliability of these measures (for example, conduct test-retest reliability) and to validate them, by testing whether baseline levels of readiness and capacity predict change in WHP implementation over time or by comparing responses of different respondents (such as a CEO and an HR leader) within one employer. Ideally, validated workplace readiness and capacity scales could be used at the start of WHP intervention research, to identify those workplaces most ready to implement WHP, workplaces that need capacity-building support prior to attempting to implement WHP, and workplaces that are neither ready to implement WHP nor willing to invest in building capacity to do so. Such instruments could help both WHP researchers and practitioners tailor their intervention approaches to suit individual workplaces' readiness and capacity to adopt and implement evidence-based policies and programs to promote employees' health.

Acknowledgments

Disclosure of Funding:

This research was supported by grant R21CA136435 from the National Cancer Institute. Additional research support was provided by the University of Washington Health Promotion Research Center, one of the CDC Prevention Research Centers (HPRC cooperative agreement number U48 DP001911-01).

References

1. Jemal A, Ward E, Hao Y, Thun M. Trends in the leading causes of death in the United States, 1970–2002. *Jama*. Sep 14; 2005 294(10):1255–1259. [PubMed: 16160134]
2. Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States, 2000. *Jama*. Mar 10; 2004 291(10):1238–1245. [PubMed: 15010446]
3. Maciosek MV, Coffield AB, Edwards NM, Flottemesch TJ, Goodman MJ, Solberg LI. Priorities among effective clinical preventive services: results of a systematic review and analysis. *Am J Prev Med*. Jul; 2006 31(1):52–61. [PubMed: 16777543]
4. Maciosek MV, Coffield AB, Flottemesch TJ, Edwards NM, Solberg LI. Greater use of preventive services in u.s. Health care could save lives at little or no cost. *Health Aff (Millwood)*. Sep; 2010 29(9):1656–1660. [PubMed: 20820022]
5. [Accessed Oct 22, 2011] Employment Situation Summary Table A. Household data, seasonally adjusted. 2011. <http://www.bls.gov/news.release/empstat.a.htm>
6. Conrad P. Worksite health promotion: the social context. *Soc Sci Med*. 1988; 26(5):485–489. [PubMed: 3281275]
7. Task Force on Community Preventive Services. [Accessed March, 2012] Guide to Community Preventive Services. www.thecommunityguide.org
8. Hopkins DP, Razi S, Leeks KD, Priya Kalra G, Chattopadhyay SK, Soler RE. Smokefree policies to reduce tobacco use. A systematic review. *American journal of preventive medicine*. Feb; 2010 38(2 Suppl):S275–289. [PubMed: 20117612]
9. Katz DL, O’Connell M, Yeh MC, et al. Public health strategies for preventing and controlling overweight and obesity in school and worksite settings: a report on recommendations of the Task Force on Community Preventive Services. *MMWR Recomm Rep*. Oct 7; 2005 54(RR-10):1–12. [PubMed: 16261131]
10. Anderson LM, Quinn TA, Glanz K, et al. The effectiveness of worksite nutrition and physical activity interventions for controlling employee overweight and obesity: a systematic review. *American journal of preventive medicine*. Oct; 2009 37(4):340–357. [PubMed: 19765507]
11. Recommendations to increase physical activity in communities. *Am J Prev Med*. May; 2002 22(4 Suppl):67–72. [PubMed: 11985935]
12. Hopkins DP, Briss PA, Ricard CJ, et al. Reviews of evidence regarding interventions to reduce tobacco use and exposure to environmental tobacco smoke. *Am J Prev Med*. Feb; 2001 20(2 Suppl):16–66. [PubMed: 11173215]
13. Bondi MA, Harris JR, Atkins D, French ME, Umland B. Employer coverage of clinical preventive services in the United States. *Am J Health Promot*. Jan-Feb;2006 20(3):214–222. [PubMed: 16422142]
14. Harris JR, Huang Y, Hannon PA, Williams B. Low-SES Workers: Health Risks and How to Reach Them. *J Occup Environ Med*. 2011; 53(2):132–138. [PubMed: 21270663]
15. Linnan L, Bowling M, Childress J, et al. Results of the 2004 National Worksite Health Promotion Survey. *Am J Public Health*. Aug; 2008 98(8):1503–1509. [PubMed: 18048790]
16. McDonnell S, Bryant C, Harris J, et al. The private partners of public health: public-private alliances for public good. *Prev Chronic Dis*. Apr.2009 6(2):A69. [PubMed: 19289012]
17. Kaiser Family Foundation. Employer health benefits: 2011 annual survey. Menlo Park, CA: Henry J. Kaiser Family Foundation & Health Research and Educational Trust; Sep. 2011
18. Huang Y, Hannon PA, Williams B, Harris JR. Workers’ health risk behaviors by state, demographic characteristics, and health insurance status. *Prev Chronic Dis*. Jan.2011 8(1):A12. [PubMed: 21159224]
19. Hughes MC, Hannon PA, Harris JR, Patrick DL. Health behaviors of employed and insured adults in the United States, 2004–2005. *Am J Health Promot*. May-Jun;2010 24(5):315–323. [PubMed: 20465145]
20. Beresford SA, Thompson B, Bishop S, Macintyre J, McLerran D, Yasui Y. Long-term fruit and vegetable change in worksites: Seattle 5 a Day follow-up. *Am J Health Behav*. Nov-Dec;2010 34(6):707–720. [PubMed: 20604696]

21. Hunt MK, Barbeau EM, Lederman R, et al. Process evaluation results from the Healthy Directions-Small Business study. *Health Educ Behav.* Feb; 2007 34(1):90–107. [PubMed: 16740502]
22. Linnan LA, Birken BE. Small businesses, worksite wellness, and public health: a time for action. *N C Med J.* Nov-Dec;2006 67(6):433–437. [PubMed: 17393706]
23. Thompson B, Hannon PA, Bishop SK, West BE, Peterson AK, Beresford SA. Factors related to participatory employee advisory boards in small, blue-collar worksites. *Am J Health Promot.* Jul-Aug;2005 19(6):430–437. [PubMed: 16022207]
24. Barbeau EM, Hartman C, Quinn MM, Stoddard AM, Krieger N. Methods for recruiting white, black, and hispanic working-class women and men to a study of physical and social hazards at work: the United for Health study. *Int J Health Serv.* 2007; 37(1):127–144. [PubMed: 17436989]
25. Beresford SA, Locke E, Bishop S, et al. Worksite study promoting activity and changes in eating (PACE): design and baseline results. *Obesity (Silver Spring).* Nov; 2007 15 (Suppl 1):4S–15S. [PubMed: 18073337]
26. Lassen A, Bruselius-Jensen M, Sommer HM, Thorsen AV, Trolle E. Factors influencing participation rates and employees' attitudes toward promoting healthy eating at blue-collar worksites. *Health Educ Res.* Oct; 2007 22(5):727–736. [PubMed: 17182973]
27. Sorensen G, Barbeau E, Stoddard AM, Hunt MK, Kaphingst K, Wallace L. Promoting behavior change among working-class, multiethnic workers: results of the healthy directions--small business study. *Am J Public Health.* Aug; 2005 95(8):1389–1395. [PubMed: 16006422]
28. Sorensen G, Barbeau EM, Stoddard AM, et al. Tools for health: the efficacy of a tailored intervention targeted for construction laborers. *Cancer Causes Control.* Feb; 2007 18(1):51–59. [PubMed: 17186421]
29. Hannon PA, Hammerback K, Harris JR, Garson G, Sopher CJ. Stakeholder perspectives on workplace health promotion: a qualitative study of mid-sized employers in low-wage industries. *Am J Health Promot.* in press.
30. Claxton G, DiJulio B, Whitmore H, et al. Health benefits in 2010: premiums rise modestly, workers pay more toward coverage. *Health Aff (Millwood).* Oct; 2010 29(10):1942–1950. [PubMed: 20813853]
31. Gabel JR, Whitmore H, Pickreign J, et al. Obesity and the workplace: current programs and attitudes among employers and employees. *Health Aff (Millwood).* Jan-Feb;2009 28(1):46–56. [PubMed: 19124853]
32. Bertera RL. Planning and implementing health promotion in the workplace: a case study of the Du Pont company experience. *Health Educ Q.* 1990; 17(3):307–327. [PubMed: 2228633]
33. Milani RV, Lavie CJ. Impact of worksite wellness intervention on cardiac risk factors and one-year health care costs. *Am J Cardiol.* 2009; 104:1389–1392. [PubMed: 19892055]
34. Greenhalgh T, Robert G, Macfarlane F, Bate P, Kyriakidou O. Diffusion of innovations in service organizations: systematic review and recommendations. *Milbank Q.* 2004; 82(4):581–629. [PubMed: 15595944]
35. Harris JR, Cheadle A, Hannon PA, et al. A framework for disseminating evidence-based health promotion practices. *Prev Chronic Dis.* 2012; 9:110081.
36. Weiner BJ, Lewis MA, Linnan LA. Using organization theory to understand the determinants of effective implementation of worksite health promotion programs. *Health Educ Res.* Apr; 2009 24(2):292–305. [PubMed: 18469319]
37. Holt DT, Helfrich CD, Hall CG, Weiner BJ. Are you ready? How health professionals can comprehensively conceptualize readiness for change. *J Gen Intern Med.* Jan; 2010 25 (Suppl 1): 50–55. [PubMed: 20077152]
38. Weiner BJ, Amick H, Lee SY. Conceptualization and measurement of organizational readiness for change: a review of the literature in health services research and other fields. *Med Care Res Rev.* Aug; 2008 65(4):379–436. [PubMed: 18511812]
39. Dejoy DM, Wilson MG, Goetzel RZ, et al. Development of the Environmental Assessment Tool (EAT) to measure organizational physical and social support for worksite obesity prevention programs. *Journal of occupational and environmental medicine/American College of Occupational and Environmental Medicine.* Feb; 2008 50(2):126–137. [PubMed: 18301169]

40. Faghri PD, Kotejshyer R, Cherniack M, Reeves D, Punnett L. Assessment of a Worksite Health Promotion Readiness Checklist. *Journal of occupational and environmental medicine/American College of Occupational and Environmental Medicine*. Sep; 2010 52(9):893–899. [PubMed: 20798646]
41. Oldenburg B, Sallis JF, Harris D, Owen N. Checklist of Health Promotion Environments at Worksites (CHEW): development and measurement characteristics. *American journal of health promotion: AJHP*. May-Jun;2002 16(5):288–299. [PubMed: 12053440]
42. Hanusaik N, O'Loughlin JL, Kishchuk N, Eyles J, Robinson K, Cameron R. Building the backbone for organisational research in public health systems: development of measures of organisational capacity for chronic disease prevention. *Journal of epidemiology and community health*. Aug; 2007 61(8):742–749. [PubMed: 17630377]
43. Jung J, Nitzsche A, Neumann M, et al. The Worksite Health Promotion Capacity Instrument (WHPCI): development, validation and approaches for determining companies' levels of health promotion capacity. *BMC Public Health*. 2010; 10:550. [PubMed: 20831838]
44. Bureau of Labor Statistics. [Accessed August 13, 2012] National Industry-Specific Occupational Employment and Wage Estimates. May. 2011 www.bls.gov/oes/current/oessrci.htm
45. Harris JR, Cross J, Hannon PA, Mahoney E, Ross-Viles S. Employer adoption of evidence-based chronic disease prevention practices: a pilot study. *Prev Chronic Dis*. Jul.2008 5(3):A92. [PubMed: 18558042]
46. Laing S, Hannon PA, Talburt A, Kimpe S, Williams B, Harris JR. Increasing evidence-based workplace health promotion best practices in small and low-wage companies: a pilot study in Washington State. *Prev Chronic Dis*. 2012; 9:110186.
47. SAS 9.2. Cary, NC: SAS Institute, Inc; 2008.
48. The American Association for Public Opinion Research. Standard definitions: final dispositions of case codes and outcome rates for surveys. 7. 2011.
49. Weiner BJ. A theory of organizational readiness for change. *Implement Sci*. 2009; 4:67. [PubMed: 19840381]
50. Patient Protection and Affordable Care Act. 111th Congress, 2d session ed2010;
51. Sorensen G, Landsbergis P, Hammer L, et al. Preventing Chronic Disease At the Workplace: A Workshop Report and Recommendations. *American journal of public health*. Jul 21.2011

Table 1

Workplace Characteristics, N=279

Characteristic		
Industry (% , n)		
Accommodation/Food Services	5.4	15
Education	29.4	82
Health Care/Social Assistance	29.4	82
Manufacturing	22.9	64
Retail Trade	12.9	36
Workplace size (M, SD)	459	624
Workplace size (% , n)		
100–249 employees	52.3	146
250–999 employees	35.1	98
1000–4,999 employees	12.5	35
Offers insurance to employees (% , n)	98.9	276
% Employees insured by workplace (M, SD)	65.0	26.4
Offers insurance to employees' partners (% , n)	95.3	266
Self-insured (% , n)	46.6	130

\$watermark-text

\$watermark-text

\$watermark-text

Table 2a
WHP Implementation by Employer Industry and Size: Percent of Employers Offering 7 WHP Interventions, N=279

	Provide healthy food	Healthy eating/weight program	Fitness facilities on-site	Fitness center discounts	Physical activity program	Written tobacco policy	Tobacco cessation program
Industry							
Accommodation/Food Services & Retail Trade	29	16	10	29	6	33	14
Education	84	33	59	30	23	68	18
Health Care/Social Assistance	51	51	22	45	18	45	27
Manufacturing	31	34	20	50	25	39	31
Size							
100–249	45	28	21	29	12	47	18
250–4,999	61	44	40	50	26	50	29
Total	52	35	30	39	19	48	23

Note. Each intervention was assessed with a single, dichotomous item. Accommodation/Food (n=15) and Retail (n=36) were combined, as their responses were similar and both categories were under-represented among survey respondents. Among the 133 of respondents that did not report offering healthy foods, 50% do not sell any food at the workplace and 50% sell food but do not report providing healthy food choices.

Table 2b

WHP Implementation by Employer Industry and Size: Percent of Employers Offering 4 WHP Interventions to Partners, N=279

	Healthy eating/weight program	Fitness center discounts	Physical activity program	Tobacco cessation program
<u>Industry</u>				
Accommodation/Food Services & Retail Trade	6	22	2	8
Education	17	21	17	15
Health Care/Social Assistance	16	32	7	15
Manufacturing	9	34	6	19
<u>Size</u>				
100–249	8	19	8	11
250–4,999	18	36	11	18
<u>Total</u>	13	27	9	14

Note. Each intervention was assessed with a single, dichotomous item asking whether this was provided to employees' spouses and partners. Percentages in this table use the entire survey sample (N=279) rather than restricting the denominator to only those employers offering each intervention to employees, to show the proportion of workplaces overall offering these programs to partners.

Table 3

Descriptive Statistics for Readiness Scales and Items, N=273

Item	M	SD	ITT	alpha
<u>General Readiness Scale</u>	<u>3.48</u>	<u>0.79</u>	---	<u>.76</u>
Senior leadership is proactive about making changes when problems are identified	3.78	0.93	.52	
When there is agreement that change needs to happen, we have the necessary financial support	3.32	1.00	.63	
When there is agreement that change needs to happen, we have the necessary staffing support	3.33	0.97	.63	
<u>WHP Perceived Benefits Scale</u>	<u>3.92</u>	<u>0.76</u>	---	<u>.82</u>
Health promotion at worksites like mine would improve employee health	3.81	0.93	.60	
Health promotion at worksites like mine can help improve employee productivity	3.95	0.81	.76	
Health promotion at worksites like mine can help control health care costs	3.99	0.92	.64	
<u>WHP Feasibility Scale</u>	<u>3.14</u>	<u>0.84</u>	---	<u>.78</u>
Senior leadership is willing to dedicate financial resources to WHP	3.15	1.14	.69	
Senior leadership is willing to dedicate staff time to WHP	3.29	1.12	.64	
Employees are willing to participate in WHP activities	3.37	0.93	.54	
Most employees at my company could take time to participate in a group-based program	2.75	1.11	.47	

Note. All items were answered using 5-point scales, where 1=strongly disagree and 5=strongly agree.

Table 4

Workplaces' Readiness and Capacity for WHP, N=273

	Readiness (Range = 1–5)			Capacity (Range=0–3)
	General Readiness	WHP Perceived Benefits	WHP Feasibility	WHP Capacity
<u>Industry</u>				
Accommodation/Food Services & Retail Trade	3.55	3.45	2.73	0.43
Education	3.32	3.95	3.11	0.92
Health Care/Social Assistance ⁶	3.53	4.16	3.35	0.89
Manufacturing	3.54	3.94	3.22	0.94
<u>Size</u>				
100–249	3.49	3.78	3.01	0.60
250–4,999	3.46	4.07	3.28	1.08
<u>Total</u>	3.48	3.91	3.14	0.83

Note. The three readiness scales were scored with 5-point scales, with higher scores indicating greater readiness. WHP Capacity is scored 0–3 based on having a WHP budget, paid wellness staff, and a wellness committee.

Table 5
Associations Among Readiness Scales, WHP Capacity, and WHP Implementation, N=273

	Readiness: General	Readiness: WHP Perceived Benefits	Readiness: WHP Feasibility	WHP Capacity	WHP Implement	Offer WHP to Partners
Readiness: General	---					
Readiness: WHP Perceived Benefits	.01	---				
Readiness: WHP Feasibility	.41**	.40**	---			
WHP Capacity	.19**	.32**	.47**	---		
WHP Implementation	.12 ⁺	.29**	.43**	.56**	---	
Offer WHP to Employees' Partners	.12*	.23**	.30**	.43**	.61**	---

Note:

⁺ indicates $p < .10$,

* indicates $p < .05$,

** indicates $p < .01$